



RE: APM 2018 Flora and Flora Monitoring Survey – Mount Peake Project

1 FLORA AND FAUNA MONITORING

1.1 FAUNA MONITORING

Conservation Significant Fauna Monitoring - Greater Bilby, Brush-tailed Mulgara, Great Desert Skink

At and surrounding the Mount Peake Project, 106 x 2 ha track-based fauna monitoring plots have been identified and marked out for long-term monitoring over the life of the Project. The plots cover a range of vegetation types and time since fire, with each deemed as suitable habitat for the presence of target conservation significant fauna making the survey effective at sampling a representative array of available fauna habitats.

Track-based fauna monitoring involves searching defined areas each year for signs of target species, including tracks, scats and burrows. This approach is used to simultaneously survey for the Greater Bilby, Brush-tailed Mulgara and the Great Desert Skink and facilitates long-term population modelling and monitoring.

During the 2018 calendar year 90 of the plots were searched for signs of the Greater Bilby, Brush-tailed Mulgara, and Great Desert Skink, resulting in no recorded sign of any of these species. A number of plots are not yet accessible as they rely on the development of the mine to allow access.

Predator Monitoring – Feral cat, fox, dog, dingo

Annual predator monitoring commenced at the Mount Peake Project in 2018 with the deployment of 25 camera traps (10 inside the Mine Area footprint and 15 in the surrounding area).

Traps inside the mine area were separated by 1 km, while traps deployed outside were separated by 5 km. All traps were set on existing tracks and roads, where the detection probability is known to be greatest (Read et al, 2015). Cameras were positioned on a metal stake, 50 cm from the ground, facing at 22.5° to the road.

The camera traps recorded 1 camel, 16 cats, 10 dingos, and 1 rabbit.

In addition to the camera trap survey, predator sign found in plots was intermittently recorded, and scats found were collected for dietary analysis. Twenty-four predator scats were collected during the survey and have been frozen, awaiting species identification and dietary analysis.



Figure 1. An example of a camera trap deployed for predator monitoring.

1.2 FLORA MONITORING

Giant Sweet Potato

During the 2018 monitoring period the methodology of defining the Giant Sweet Potato (GSP) population range and size was revised to refine the boundaries of potentially suitable habitat.

The predicted species range was overlaid with the known vehicle access for the area and 50 x 200 m transects were distributed across the intersection of tracks and species range. The number of GSP's occurring within 5 m of either side of the transect (total transect area of 200 m x 10 m) were counted and recorded. In a small number of situations the 200 m transect returned a count of zero, yet GSP were observed in low density outside of the transect. On these occasions a second transect was installed nearby to improve the accuracy of the data capture.

The GSP suitable habitat variables defined in the GSP monitoring plan 2017 relied on the interpretation of aerial imagery for boundary definition. Across most of the range the assessment has been successful in identifying the distribution of Mulga. In some areas, possibly due to fire scars or just the very large size of the area, some unsuitable habitat has been included. The 2018 survey used the same methodology and vegetation descriptions as outlined in the 2017 Monitoring Plan and compared the projected vegetation to the observed vegetation.

The size of the potentially suitable habitat was reduced by 1.1% to 28,646 ha.

The density of GSP is calculated at 21.9 plants ha⁻¹ using the data from the 53 transects in 2018. The total population size of GSP within the potentially suitable habitat is calculated as 626, 969.